

PATENT ABSTRACTS OF JAPAN

(11)Publication number : **07-202350**

(43)Date of publication of application : **04.08.1995**

(51)Int.Cl.

H01S 3/18

H01L 33/00

(21)Application number : **06-334369**

(71)Applicant : **SIEMENS AG**

(22)Date of filing : **19.12.1994**

(72)Inventor : **SPAETH WERNER
GRAMANN WOLFGANG
ALTHAUS HANS-LUDWIG
DIETRICH RALF**

(30)Priority

Priority number : **93 93120734** Priority date : **22.12.1993** Priority country : **EP**

(54) OPTOELECTRONICS DEVICE AND MANUFACTURING METHOD THEREFOR

(57)Abstract:

PURPOSE: To economically manufacture optoelectronic devices by providing and fixing a lens-coupling optical element, so that the light generated in a larger chip hits almost vertically to the optoelectronic device.

CONSTITUTION: A laser chip 1 is, while a side surface adjoining a resonator surface of the laser chip 1 is provided with a mirror film 5, an a common supporter 2, between two supporting members 3 and 4 inclined by 45° is provided with respect to the resonator surface. Then, the light generated in the laser chip 1 is directed upwards, almost vertical to the upper surface of the common supporter 5, and at least on one supporting member 5, a lens-coupling optical element 6 is provided and fixed, so that the light in the laser chip 1 hits the lens-coupling optical element 6 almost vertically. Thus, optoelectronic devices are manufactured economically.

